

ONE TIME EXIT SCHEME

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10AU761

Seventh Semester B.E. Degree Examination, April 2018

Non – Destructive Testing

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1 a. Discuss about any 3 optical aids used in visual inspection. State the advantages and limitations of NDT. (12 Marks)
b. Briefly explain a liquid penetration inspection with necessary sketches. (08 Marks)
- 2 a. Explain in brief different methods of generating magnetic field. (10 Marks)
b. With neat sketch, explain the procedure to carryout the magnetic particle inspection. (10 Marks)
- 3 a. Explain the principle of Eddy current inspection. (04 Marks)
b. Write a note on Inspection coils. (06 Marks)
c. Explain different factors or operations variables affecting eddy current inspection. (10 Marks)
- 4 a. Explain with a neat sketch, microwave holography. (10 Marks)
b. Discuss about application and limitations of microwave inspection. (10 Marks)

PART – B

- 5 a. With a neat sketch, explain characteristics of ultrasonic inspection. (10 Marks)
b. Explain different variables affecting factors of ultrasonic inspection. (10 Marks)
- 6 a. With a neat sketch, explain pulse echo method of ultrasonic inspections. (10 Marks)
b. Write a note on : i) Transducer element ii) Complete search units. (10 Marks)
- 7 a. With a neat sketch, explain the working principles of X – ray radiography. (10 Marks)
b. Write a note on :
i) Radiographic films ii) Radiographic sensitivity. (10 Marks)
- 8 a. With a neat sketch, explain working of optical holographic recording. (10 Marks)
b. Write a note on system and techniques applications of Acoustic holography. (10 Marks)
